Jesse Eaton

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https://jaebird123.github.io/
Python, C, Go, Javascript
sklearn, xgboost, gcloud, Flyte

Experience

Senior Machine Learning Scientist, Freenome — September 2019 - Present

- Increased classification performance to industry high of 0.9 sensitivity at 0.9 specificity for detection of colorectal cancer by creating Freenome's core ML model
- Promoted iterations of important models by developing framework for model comparison
- Enabled explosive model development by refactoring and productionizing core custom model
- Streamlined user model reports by redesigned reporting and model diagnostic infrastructure
- Managed ML science intern leading to development of robust kmer model pipeline
- Increased performance relative to Protein and DNA signals by identifying RNA markers

Machine Learning Research Engineer, Qeexo — February 2018 - April 2019

- Generated multiple experimental company products by fusing sensor data with efficient machine learning classifiers https://www.youtube.com/watch?v=1S6irWy8G20
- Compressed gradient boosting classifier to 20 kB size for highly time/space/energy constrained environments achieving < 5ms classification time
- Increased customer awareness by demoing projects at Consumer Electronics Show 2019

Graduate ML Researcher, Carnegie Mellon — January 2017 - January 2018

- Developed theory for tumor deconvolution/phylogenetic inference using structural variants
- Led design and developed machine learning pipeline for predicting tumor progression
- Accepted as presenter at ISMB 2018 Comp Bio conference for deconvolution paper and published in the journal "Bioinformatics" https://academic.oup.com/bioinformatics/article/34/13/i357/5045780

Software Systems Engineer, MITRE — September 2015 - August 2016

- Built web based electronic medical validation tool for Health Services Dept. as main engineer using Amazon Elastic Compute Cloud (AWS)

Leadership and Awards

Culture Leader, Freenome — January 2022

- Nominated as one of 10 company culture leader for exemplifying Freenome's values

Patent for signal discovery, Freenome — April 2020

- Discovered novel RNA signal relating to 11 sets of specific miRNAs by building classifiers for colon cell proliferative disorders

Education

Carnegie Mellon, M.S. Computational Biology September 2016 - December 2017

- GPA: 3.91, Courses: machine learning, statistics, simulation, regression, computational genomics, automation of biology, cancer biology

Tufts University, B.S. Biomedical Engineering September 2011 - May 2015

- GPA: 3.45, Courses: genetics, algorithms, quantum chemistry, medical imaging, machine programming and assembly, drug delivery, tissue engineering